

Notice of Allowability

Application No.

10/708,384

Examiner

Timothy J. Dole

Applicant(s)

HSU ET AL.

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendments filed September 28, 2007.
2. ☒ The allowed claim(s) is/are 1-7,9,11-24,31,32 and 34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney of record Daryl K. Neff on December 18, 2007.

The application has been amended as follows:

Amend claims 1, 3-6, 11, 12, 14, 16-18 and 34 as shown below.

Cancel claims 33 and 35.

1. (currently amended) A system for detecting a fault in a transmission link, comprising: a reference level generator ~~operable~~ to output a reference level selectable according to one of a direct current (DC) mode threshold and an alternating current (AC) mode threshold, wherein the DC mode threshold is a fixed potential and the AC mode threshold varies with time; and a comparator ~~operable~~ to detect the crossing of the reference level by an input signal arriving from the transmission link, the comparator having a degree of hysteresis selectable in response to a second signal input to the comparator other than the input signal arriving from the transmission link.

3. (currently amended) A system as claimed in claim 1, wherein said reference level generator is ~~operable to~~ can be operated to selectably switch between outputting a lower threshold and an upper threshold as the DC mode threshold, wherein said comparator ~~is operable~~ can be operated

to detect a crossing of the upper threshold and to detect a crossing of the lower threshold.

4. (currently amended) A system as claimed in claim 3, wherein said comparator ~~detects~~ can be operated to detect a falling crossing of the lower threshold and ~~detects~~ detect a rising crossing of the upper threshold.

5. (currently amended) A system as claimed in claim 4, wherein said reference level generator further comprises a multiplexer and said multiplexer can be operated ~~operable~~ to select between outputting the DC mode threshold and the AC mode threshold.

6. (currently amended) A system as claimed in claim 1, wherein said reference level generator includes a low-pass filter coupled to the input signal ~~and is operable to~~ , wherein said low-pass filter can be used to generate the AC mode threshold from the input signal.

11. (currently amended) A system as claimed in claim 1, wherein said system ~~is operable~~ can be operated to detect a short-circuited capacitor in an AC coupled transmission link when said comparator fails to detect a crossing of the DC mode threshold by the input signal.

12. (currently amended) A system as claimed in claim 1, wherein said reference level generator ~~is operable~~ can be operated to output a first level of the AC mode threshold, wherein said comparator ~~is operable~~ can be operated to detect a falling crossing of the first level and said reference level generator ~~is operable~~ can be operated to output a second level of the AC mode threshold higher than the first level, wherein said comparator ~~is operable~~ can be operated to detect a rising crossing of the second level.

14. (currently amended) A system as claimed in claim 12 wherein said reference level generator ~~is further operable~~ can be operated to vary the reference level between the first level and the second level in response to feedback from said comparator.

16. (currently amended) A system as claimed in claim 1, wherein said comparator ~~is operable~~ can be operated to detect a falling crossing of the reference level when the input signal reaches a first value and ~~is operable~~ can be operated to detect a rising crossing of the reference level when the input signal reaches a second value, wherein the separation between the first value and the second value is adjustable according to a setting of said comparator.

17. (currently amended) A system as claimed in claim 1, wherein said reference level generator ~~is operable~~ can be operated to maintain the DC mode threshold at a substantially constant level, wherein said comparator ~~is operable~~ can be operated to detect a falling crossing of the DC mode threshold and to detect a rising crossing of the DC mode threshold at substantially the same level of the input signal.

18. (currently amended) A method of detecting a fault in a transmission link, comprising:
providing a reference level selectable according to one of a direct current (DC) mode threshold and an alternating current (AC) mode threshold, wherein the DC mode threshold is a fixed potential and the AC mode threshold varies with time; and comparing an input signal arriving from the transmission link with one of the DC mode threshold and the AC mode threshold to determine whether a fault is present in the transmission link, said comparing being performed with different degrees of hysteresis depending upon a value of a second signal.

34. (currently amended) The system as claimed in claim 33, wherein the second signal is represented by multiple digital bits, the system further comprising a digital-to-analog converter ~~operable~~ which can be operated to convert the second signal to an analog second signal having multiple different levels and the comparator ~~is operable~~ can be operated with different degrees of

hysteresis in accordance with the multiple different levels of the analog second signal.

2. The following is an examiner's statement of reasons for allowance: claims 1-7, 9, 11-24, 31, 32 and 34 are considered to be allowable due to the inclusion of claim limitations: "the comparator having a degree of hysteresis selectable in response to a second signal input to the comparator other than the input signal arriving from the transmission link" in claim 1; and "said comparing being performed with different degrees of hysteresis depending upon a value of a second signal" in claim 18. Claims 2-7, 9, 11-17, 19-24, 31, 32 and 34 are considered to be allowable due to their dependence on claims 1 and 18.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Dole whose telephone number is (571) 272-2229. The examiner can normally be reached on Mon. thru Fri. from 8:00 to 4:30.

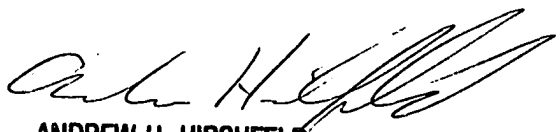

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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TJD



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AC Coupled Waveforms
IEEE Std 1149.6-2003

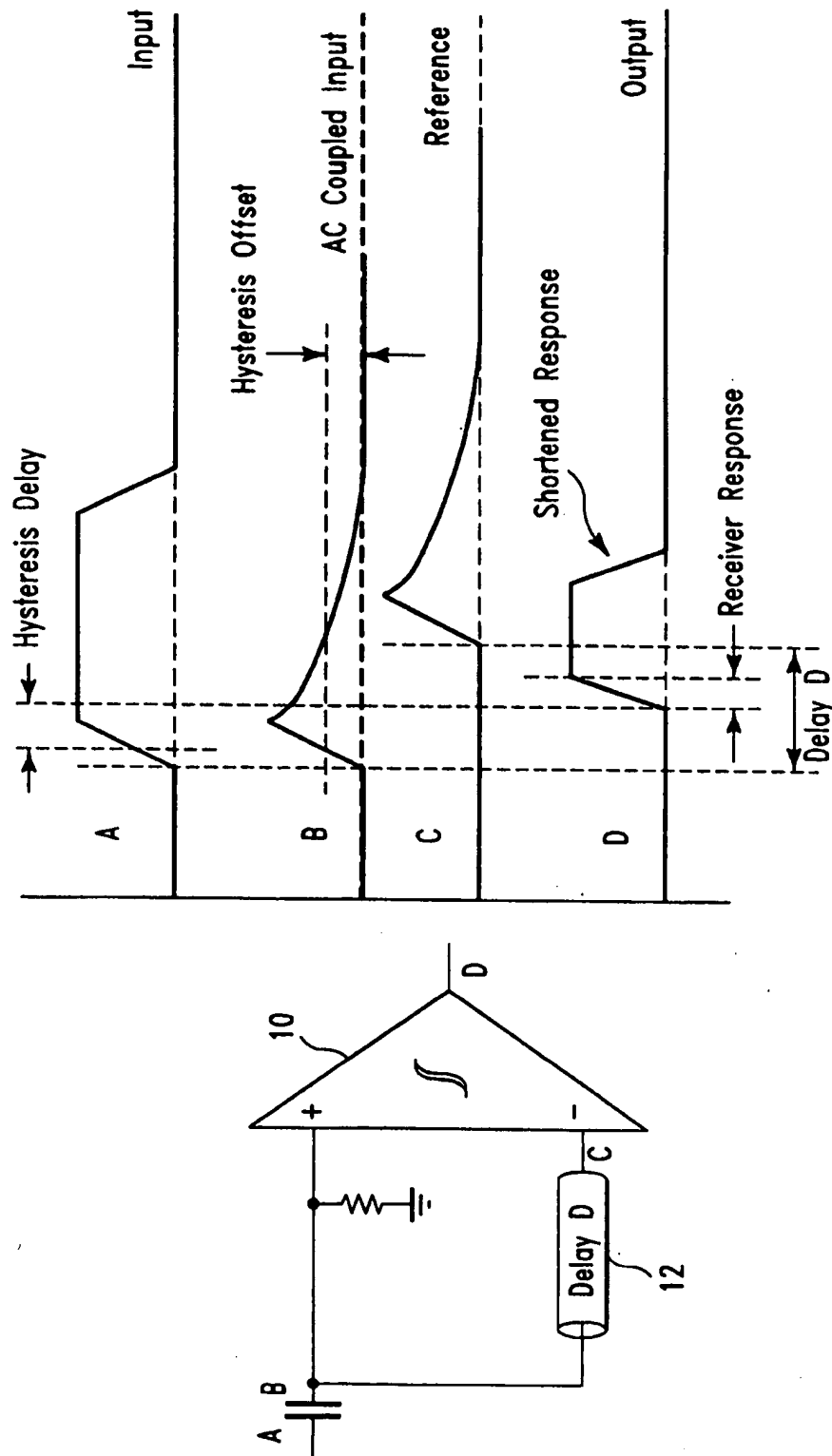


FIG. 1

Prior Art

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